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JUN 24 1931
BUREAU
OF
PLANT INDUSTRY

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

June 6. 1931.

Not for publication without
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REPORT FOR THE WEEK ENDING JUNE 6, 1931.

PENDLETON:

The weather the past week has been rather warm with maximum temperatures varying from 78 to 95 degrees. The wheat in this section is not in immediate need of rain. Other sections of Umatilla County and the wheat belt of Eastern Oregon and Eastern Washington are less fortunate, in some areas the wheat is almost a total failure.

The warm weather is making the trees in the windbreak grow rapidly. Black Locusts planted last spring made a growth of seven to eight feet the first year. Chinese Elm made a four-foot growth the first year. The Western Yellow Pine, Douglas Fir, Maritime Pine, Caragana, Russian Olive and Arborvitae all made fine growths last year. The Russian Mulberry did not do very well last year and is very slow in leafing out this year. If the rate of growth continues to be as great as that of the first year we will soon have a good windbreak to protect the station buildings.

The winter wheat is beginning to color up a golden brown. Without rain the harvest season will be early this year. Spring wheats are almost fully headed. Some of the early winter barleys are ripe. The showiest crop in the rotations at present is Utah winter barley after fallow. These plots of winter barley have fine stands, vigorous growth, big heads and about forty-two inches tall.

The alleys in the cereal nursery were trimmed out this week. With the alleys trimmed out the nursery makes a very presentable appearance. The cereal nursery occupies over two acres of land.

Station visitors this week were Dr. H. V. Harlan, Office of Cereal Crops and Diseases, in charge of barley investigations; Mr. G. H. Bell, Cambridge, England, research fellow on tour with Dr. Harlan; and County Agents, Holt, Avery, Fortner and McDaniel from Umatilla, Union, Baker and Wallowa Counties respectively.

Maximum temperature 95; minimum 36; precipitation, none.

HAVRE:

Conditions the past week were somewhat better than the previous week. A slow rain began the night of June 5, resulting in .40 inch of rainfall. This was followed by cool weather which resulted in good use of the water that fell.

Some of the early winter wheat has started to head. Many of the winter wheat plots are rather badly injured and may not recover to any great extent. Spring grains were not hurt severely from drought and are showing quite a little advancement.

Early tumbling mustard is in bloom and Russian thistles are starting to make rapid growth.

The following gives the weather conditions for 1931 as compared with the normal:

Climatic Data for May

Rainfall	.39	Normal	1.92
Evaporation	7.583	"	5.989
Mean Maximum	70	"	66
Mean Minimum	41	"	41
Mean	55	"	53
Wind velocity	6.5	"	6.5

For the past week maximum temperatures ranged from 54 to 85 degrees, minimum from 41 to 51 degrees, evaporation from .075 to .425, total precipitation, .43 inch.

JUDITH BASIN:

All crops have made excellent growth during the past week. Alfalfa, which showed practically no growth at all two weeks ago, is six to eight inches tall and is growing rapidly. A general rain on June 3, together with the moisture which fell the previous week, has improved the crop outlook considerably. Although it will take much more moisture than has already fallen, the rains of the past few days have done much to dispel the gloom and pessimism which has prevailed throughout this section for the past three months.

Oat and barley plots, which had been damaged beyond recovery by cutworms, were reseeded the first of the week. Plots are being trimmed to-day, June 6. Other work during the week consisted of building fence, painting, cultivation and hoeing in the shelter belt.

Maximum temperature 77; minimum 38; precipitation, .57 inch.

HUNTLEY:

The past week has been more favorable for crop growth than any previous week this season. Cool and cloudy weather has prevailed nearly every day and three showers were received. One shower totaling .25 inch was sufficient to freshen grasses and encourage the germination of weed seed lying near the surface of the ground. The moisture did not penetrate to the depth of crop seeding. The total precipitation for May was .17 inch as compared to the 21-year average of 2.13 inches for the month. The total moisture received for March, April and May of this season is 1.39 inches whereas the normal for the period is 4.21 inches.

Field work during the week has included cultivating out and reseeding over 50 plots in the rotation and tillage experiments. Stands on these plots were very thin due to cutworm injury and much of the seed sprouting and then dying before coming up. Weeds had gained a foothold in the bare places of these plots and had become more numerous than the grain plants.

Stands of corn remain about the same as reported last week. The M.C. Fallow and listed plots of corn have fair stands but other tillage methods over the field show but a dozen or two plants to the plot.

Maximum temperature 87; minimum 42; precipitation, .33 inch.

SHERIDAN:

A dashing shower early in the week, followed by light showers extending over the next two days, provided much needed moisture which relieved the droughty conditions temporarily again. The surface during the last two days was the wettest that it has been since the heavy rain of June 1, 1929, but the moisture has penetrated the ground only about five inches in alfalfa, winter rye, and other ground similarly dry and hard. Considerable washing resulted from the first shower in the newly-worked roadways.

Sorgo and Sudan grass were seeded early in the week in the methods of seeding, rotations, and pastures. Other seedings of these crops remain to be seeded, but the roadways still continue too wet to get any machinery over them.

Sheridan, continued:

Stands of safflower and proso have been badly thinned by cutworms. Early seedings of flax were entirely destroyed either by freezing or by cutworms. The flax appeared to be in good condition shortly after the freezing weather. The flax in the rotations emerged with an uneven stand, but more of it has emerged since the rains this week. Some of the plots probably will have to be reseeded, however. Weeds are getting a good start now while no field work is possible. There appears to be a better stand than usual of corn, but cutworms have been working on it on sod land. Early varieties of barley in the variety test and some of the winter wheat are in the boot. What little sweet clover came through the past season is blossoming too short to make any hay.

The most of the dead trees in the shelter belt were pulled, and trimming of dead wood out of the remainder of the shelter belt was continued during the week.

Maximum temperature 86; minimum 41; precipitation, 1.04 inches.

DICKINSON:

Because of the dry weather the condition of all crops continues to be poor and uneven.

Wheat on some of the fallow plots looks good but like other methods some of it is spotted. Oats and barley which were reseeded are emerging unevenly. Corn has a fairly good stand and grew during the week.

Flax on the Rotations was reseeded to-day, June 6. Some emerged after the shower last week but the stand was too thin to leave.

Rye on the green manure plots was plowed under to-day. The plants were in bloom at a height of 18 to 20 inches and with a thin stand of culms. Although the winter survival was 100 per cent, the dry weather had prevented stooling.

Mr. W. H. Black, Senior Animal Husbandman, in Charge of beef and dual purpose cattle, Bureau of Animal Industry, visited the station on June 4.

Maximum temperature 88; minimum 37; precipitation, .07 inch.

MANDAN:

Agronomy

The past week has been favorable for all field work. The good rain of last week caused an improvement in all crops.

Corn is now up to an excellent stand. Winter rye is fully headed.

Fallow plots were plowed early in the week. Plowing is practically completed for 15 acres of fallow in Field P. Sorgos were planted on June 1. All plots were trimmed during the week.

The total rainfall for May was 2.14 inches compared with the normal of 2.42 inches. The precipitation for the year to the end of May was 4.68 inches compared with the normal of 5.81 inches.

Maximum temperature 84; minimum 40; precipitation, .29 inch.

Cooperative Grazing Experiment

Native vegetation has improved since the rain of last week. Blue grama grass is now making a rapid growth.

The steers put on unusually high gains during the 15 days in May. The gains for this period were the highest that have been obtained for the same period, since the grazing experiment started. The cattle were on the reserve pasture from May 20 until they were started in the pastures. The weather was cool and the pasture was somewhat short so the steers perhaps did not put on a normal fill before being turned on to the various pastures. They made the following gains for the 15-day period in May:

Pasture (acres)	No. of steers	Gain per head (pounds)
100	10	105.5
70	10	96.5
50	10	95.0
30	10	97.5
Rotation (70)	14	102.5
Brome (25)	8	108.8
Brome (10) **	7	127.1
Reserve (93)	6	96.7

** Formerly the sweet clover pasture.

Mandan, continued:

Arboriculture

The past week has been spent in hoeing in the testing blocks, and pruning and spacing experiments.

All conifer seed in beds has emerged during the week with excellent stands.

The shelter belt files and records of 115 cooperators in 8 counties in Wyoming and 47 cooperators in 8 counties in South Dakota, have been transferred to the Central Great Plains Field Station, Cheyenne, Wyoming. These cooperators comprise all years from 1916 to 1930, inclusive. Applicants for 1932 plantings in the counties transferred will be furnished trees by the Mandan Station.

Horticulture

Winter injury notes were taken during the week. This year's notes are of no value in estimating the relative hardiness of the different varieties, as supposedly hardy varieties often showed severe injury, while some tender or semi-hardy varieties came through the winter without apparent damage. This is explained by the unusually mild winter, and any killing that occurred was due to a weakened condition of the plant caused by drought or red spider damage last summer, rather than too cold during the winter. Even Burbank plum trees showed no winter injury. Compass cherry trees were badly infested with red spider last summer, and lost most of their leaves, and showed considerable dead wood this spring.

The severe spring frosts destroyed practically all apple and crab blossoms, so there will be no apples or crabs this year. Early blooming varieties of plums, including all Prunus nigra and Prunus ralacina varieties, were also severely damaged by the frost and have set very little fruit. Hybrids of the Japanese plum with the native varieties show about a ten to twenty per cent set of fruit on an average. However, Prunus americana varieties and sandcherry hybrids bloomed later as a class, and show about a fifty per cent set. Currants and gooseberries also show a fair set of fruit, and such native fruits as Juneberries, sandcherries, Golden currants, and chokecherries, have set good crops. Chinese cherry blossoms were practically all killed by the frost.

Mandan, continued:

Horticulture, continued.

Softwood cuttings of gooseberries, Chinese cherries, and a selection of native fruits were made during the week. Brome grass was sown in order to prevent further soil erosion in the south breeding blocks. Other work included hoeing, hauling brush and staking budded stock.

The week has been quite favorable for planting due to its being fairly cool, with little wind and a quite moist soil. Tomatoes for the breeding project were set out the early part of the week, 5200 plants comprising 102 selections are included in the lot. Replanting of lost stands after last week's frosts and windstorms was done the last part of the week. It was found necessary to replant all cabbage, cauliflower, beans, peas, and partly the stand of early lettuce. Things now again look quite favorable.

Lawns and shrubbery about the grounds are greatly improved since the rain. There is very little bloom noticeable, frosts having killed flower buds on all spireas and lilacs which predominate in the station plantings. Viburnums apparently escaped effects of the cold. Snowballs and Highbush cranberries are in bloom now and have never been better.

Mr. W. H. Black, Animal Husbandry, in Charge of beef and dual purpose cattle, visited the station during the week.

BELLE FOURCHE:

Moderate weather has prevailed throughout most of the week. Light rains were received on June 3 and 5, but the precipitation was not sufficient to be of any material benefit to crops.

Winter wheat and rye are again suffering from lack of moisture. Flax, spring wheat, oats, and barley have made a rapid growth, except on a number of the continuously cropped plots which are overgrown with Russian thistles. Russian thistles are many times more numerous this year than usual and threaten to crowd out the small spring grain on some of the plots. Yellow sweet clover for green manure has been seriously affected by the dry weather this spring and is blossoming at a height of only 6 to 10 inches. Satisfactory stands of corn have been obtained on all plots except one where ground squirrels have done considerable damage.

Belle Fourche, continued:

Sorgo was planted during the latter part of the week, and fallow land was cultivated to control Russian thistles. All plots were trimmed and the roadways cultivated.

Maximum temperature 86; minimum 43; precipitation, .42 inch.

ARDMORE:

The weather during the fore part of the week was warm and dry, changing to cool and threatening with some precipitation at the end of the week.

The total precipitation for 1931 for the first five months was 3.43 inches, or 2.83 inches below the 19-year average for the same period of time. The following table gives the precipitation by months, together with the 19-year average:

	Jan.	Feb.	Mar.	Apr.	May	Total
19-year average...	.35	.35	.65	2.06	2.85	6.26
1931.....	.02	.36	.73	.19	1.13	3.43

Alfalfa, cultivated pasture crops and native grasses ceased growth and in some instances began to fire prior to the shower on June 3.

Corn plantings have shown slow and irregular germination this season. The plants began to emerge on May 26 and some were showing up at the end of the present week.

Winter rye has headed out and green manure plots are at the stage for turning under.

Other small grain crops were tillering during the week.

The steers in the summer grazing experiments were weighed at the end of the first ten-day periods. The gains per head for the different pastures are given below:

	Steers per pasture	Pounds gain
80-acre pasture, ground barley supplement	8	9.4
80-acre pasture	8	-2.5
160-acre rotation pasture	16	-2.2
300-acre reserve pasture	7	5.0

Maximum temperature 89; minimum 43; precipitation, .45 inch.

ARCHER:

The weather has been a protraction of the latter part of last week, which consisted of sunshine and gentle rains. The total precipitation for the week was 1.20 inches. The temperatures, on the whole, have been favorable for plant growth.

Vegetation has responded to the above conditions, which have changed the outlook of crop production. Winter wheat is looking good and is well toward the end of the jointing stage. Spring seeded crops present a favorable outlook. The native grasses have made unusual growth during the last ten days.

Work at the station has consisted of making the June 1 dates-of-seeding, seeding millet in the dairy field, planting potatoes on the rotation plots, and the planting of the potatoes in the disease experiment. Considerable manure has been hauled and feed for the dairy cattle was ground yesterday, June 5.

The repair of fences and corn cultivating machinery is in progress.

Messrs. W. C. Deming, John C. Thompson and Geo. E. Brimmer visited the station June 2.

Maximum temperature 81; minimum 42; precipitation, 1.20 inches.

AKRON:

The fore part of the past week was favorable for field work. The later part witnessed a fine drizzling rain which will sustain crop growth for several days.

Rotation fallow plots were plowed and packed the later part of last week and should have been noted in last week's report. Rotation green-manure rye plots were plowed and packed the middle of the past week. The rye was in bloom stage. The rye was very short and the head cover on the plot very thin. Other field work was the seeding of Sudan grass for pig pastures across the railroad, the seeding of the rotation sorgo plots and the seeding of the forage sorgo variety experiment. All details were completed for seeding the grain sorghum variety experiment beginning Thursday morning, June 4, but wet soil interferred. Gravel hauling occupied the attention most of the time of one team during the week.

Akron, continued:

All corn has emerged to excellent stands regardless of the previous soil preparation. Cutworm and ground squirrel damage to the corn has been of a minor nature this year. Small grain crops present about average prospects at this season of the year. Some very early winter wheat, oat, and barley varieties are heading in the variety experiments.

It now appears that very serious top-killing of the Hackberry trees at this station has occurred during the past winter and spring. This tree has up to this time appeared to be the very hardiest of the deciduous trees. First mocking bird of the season was noted during the past week.

A visit from Mr. Clayton Watkins, Extension Forester for Nebraska should have been noted in last week's report. Mr. Fred R. Johnson, of the Denver Branch of the Forest Service, Mr. R. E. Ford, Assistant State Forester, Mr. George Emerson, Shelter Belt Specialist for the Central Great Plains Station at Cheyenne, and Mr. E. Q. Johnson, Forest Nurseryman for the Fort Hays, Kansas, Station visited the station on Tuesday, June 2.

Dr. C. E. Leighty and Mr. A. L. Hallsted visited the station Saturday and part of Sunday.

Maximum temperature 90; minimum 45; precipitation, .64 inch.

NORTH PLATTE:

The drought, which had persisted through April and May, was broken by copious rains on June 5 and 6. The April-May total was 1.48 inches and the deficit for the two months was 3.56 inches.

A considerable amount of small grain had been severely injured. The rains of this week will bring about a substantial recovery but, in many cases, high yields cannot be expected. The rains will be of great value to pastures and meadows, and in completing germination of row crops. Several days of high temperature, strong winds and low humidity preceded the rain. The total rainfall on the table was 2.51 inches. This came slowly enough so that there was but little loss by run-off.

COLBY:

The weather during this week has been more favorable to crops than has been the rule most of the spring. A shower on June 1, followed by warm temperatures stimulated plant growth. A hard shower, accompanied by a high wind and some hail, fell Thursday evening, June 4. The hail did considerable damage in spots throughout this county, but the damage here was almost negligible. The leaves of corn were frayed some and some heads of wheat and barley were broken over. The surface soil has been soaked, the first time since the drying winds early in May.

The sorghum plots were planted the fore part of the week. It looks as though much of the seed may now be covered so deep that emergence will be poor unless light showers break up the crust that is forming.

The winter wheat is all headed. The fallow wheat is between 30 inches and three feet high. The wheat on the continuous cropped plots ranges between 16 and 28 inches in height. The fallow wheat is thick with heavy foliage, and the rest is quite thin with rather sparse foliage. The length of heads seems to be somewhat in proportion to the length of straw. Oats are about headed at a height of from 12 to 16 inches. Barley is beginning to head, also short. Spring wheat is just entering the boot. The stand of the spring grains is generally thin and the growth scant, with more weeds than usual.

The corn has been thinned and is now ready for the first cultivation as soon as the soil is dry enough, being about four inches high.

Dr. C. E. Leighty and Mr. A. L. Hallsted visited the station Thursday and Friday, June 4 and 5.

Weather data for the week: Maximum Temperature 94; minimum 42; precipitation, .69 inch.

Maximum for May, 96, minimum 27, last killing frost 29 degrees on the 22nd, precipitation, 1.32 inches (normal 2.47 inches). Precipitation deficiency for 1931, .50 inch.

GARDEN CITY:

All planting was finished on the project to-day, June 6. Listed seed beds were planted June 3. All surface planting was done May 30 and 31. Milo and kafir are now up showing good stands. Cowpeas are coming well.

Wheat is again beginning to fire after being revived with the 2.26 inches of moisture that fell two weeks ago. Many of the fallow plots are wilting and firing badly. Wheat has been fully headed for over a week. Unless we get some rain soon harvest will start by the 20th or possibly sooner.

General work besides planting the past week has been mostly hoeing weeds and odd jobs of clean-up nature. We have had no rain for two weeks that amounted to any value. Each day has clouded up and promised something but clouds were the extent of it.

Wind velocity has been below normal for most of the week. Temperatures were rather high. Five days the maximum was 90 or above. Maximum temperature 97; minimum 45; precipitation, none.

TUCUMCARI:

Weather the past week has been very favorable for field work, but the beating rain, with some hail, totaling 1.34 inches the night of May 29, necessitated breaking the crust on nearly all plantings. Periods of high wind also made harrowing necessary to avoid soil movement on land where seedlings had emerged.

Following the heavy rain the plot and increase land not planted were reworked and all north field, new sod land, and listed methods with milo plots and forage sorghum plots were planted. Plantings also included considerable rowed and drilled increase land. Land now unplanted consists of the last date of grain sorghums, forage sorghums, broomcorn, cotton, and some ten acres of increase.

Hail May 29 injured grapes quite severely, about 50 per cent of the foliage and perhaps 25 per cent of branches and 25 per cent of fruit bunches being destroyed. Cotton was the only field crop seriously injured, many rows apparently injured at least 60 per cent.

Maximum temperature 91; minimum 48; precipitation, .04 inch.

Wind velocity, 4.2 miles per hour, with periods of calm followed by short periods of high velocity; evaporation, 2.070 inches.

DALHART: (Report for the week ending May 30, 1931.)

The weather remained favorable for field work during the week. Due to the rain of the previous week it was necessary to break the crust on all of the plots which had been planted. The crust was broken on Monday, May 25, and now except for a few rows of cotton all plots which were planted previous to May 25 are up to stands. These crops are sorghum varieties, cotton varieties, soybean rotation plots, corn varieties, and corn rotation plots.

All of the plowed plots were either disked or harrowed during the week. The seedbed preparation for all of the sorghums are now complete with the exception of some late plowed plots. These seedbeds are in excellent condition. In spite of rather cool temperatures the soil is now sufficiently warm and moist for rapid germination. Soil temperatures at the depth of planting this afternoon were 75 degrees. This temperature coincided with the air temperature at the soil surface, while the air temperature in the shade was only 68 degrees. All tree and nursery plantings and the vineyard were also cultivated during the week.

Plantings made during the week consisted of a nursery of 58 varieties of soybeans planted in duplicate, planting of peanut plots, and of Honey sorgo seed plots. To-day, May 30, was spent in assisting Dr. H. A. Rodenhiser, of the Division of Cereal Crops and Diseases, in the planting of a sorghum smut nursery. Planting plans are for planting to continue throughout the coming week if the weather permits.

Dr. C. E. Leighty and Mr. E. F. Chilcott visited the station on May 29.

Maximum temperature 89; minimum 48; precipitation, .19 inch.
Wind velocity, 7.4 miles per hour; evaporation, 1.996 inches.

DALHART:

The first four days of the week were favorable for field work. All fallow plots and fields were plowed during the week except for the dates of plowing. Planting was continued for the first four days of the week. The second-date of planting of the grain and forage sorghums was planted on June 1. The fourth-date of planting for cotton was planted on June 1 also. The grain and forage sorghums variety test on fallow was planted on the 2nd. All of the kafir plots on the rotations were planted. Several miscellaneous fields of forage and grain sorghums were planted. The rain of .44 of an inch the night of the 4th kept us out of the field on Friday, June 5, and another rain Friday night of .28 of an inch kept us out of the field to-day, June 6.

Dalhart, continued:

There was ample moisture in the soil for all seedings to insure germination before the rains. There is a possibility that a crust may form before emergence for those plots planted just ahead of the rain.

Every thing planted previous to June 1 is up to good stands. Late this afternoon it was noticed that the sorghum varieties which were planted the afternoon of the 1st were emerging to thick stands. This rapid emergence for this time of the year is due to the fact that the seed was planted in moist soil and to the fact that the temperatures, both soil and air, were relatively high during the week.

There still remains about a week of continuous planting of sorghum and cowpea plots.

Our rainfall for May was 1.92 inches which brought our yearly rainfall to about normal for the first five months of the year. The evaporation for May was 7.35 inches or more than an inch under normal. Wind velocity for May was likewise under the normal. The mean temperature for May was 2 degrees below a 24-year average.

Maximum temperature 95; minimum 44; the next lowest minimum was 53; precipitation, .72 inch.

Wind velocity, 4.5 miles per hour; evaporation, 1.75 inches.

BIG SPRING:

Weather conditions during the past week have been such that the entire time could be devoted to field work. For the most part crops that had been planted have emerged to good stands, and those that were up have made a very good growth.

Planting has occupied the time of most of the station force during the entire week. The date variety planting of grain and forage sorghums was made on June 1; most of these have emerged to stands to-day, June 6. The kafir and milo plots, as well as the two-row alternate planting of legumes and sorghums, were planted during the week. Other planting has consisted of increase fields of milo, hegari, kafir and feterita.

Maximum temperature 93; minimum 57; precipitation, none.

LAWTON:

The lack of moisture and strong southerly winds, accompanied by maximum temperatures of 92 and 93, forced the maturity of small grains very rapidly during the week. Harvest of all winter oats was completed June 4. Some of the spring-oats rotation plots, the January 21 seeding of oats in the rate and date project, and a ten-acre field of fulghum were harvested June 2 to 5. Five rotation wheat plots and one plot of Kanred x Prelude wheat were harvested June 5. The B and C plots of Prelude x Kanred will mature about three or four days later. On the wheat plots that were harvested the straw was dead or nearly so, and the berry will likely shrivel and shrink. Maturity had every evidence of being premature.

A rain of .46 inch on the night of the 5th will likely be very beneficial to a good many rotation plots of wheat and most of the varieties, especially the later maturing ones. Oats that are still green will also profit by this shower. A lashing wind from the north accompanied the rain on the 5th, but did not cause any lodging in wheat. Brunker and Burt x 60 Day oats were blown flat on the ground, but will likely straighten up.

Wheat on the rotations ranges from 31 to 47 inches in height, most of it, however, averaging 36 to 40 inches. The winter wheat varieties range from 31 to 50 inches in height. Most of the winter oats produced a very heavy turf and a growth of 38 to 48 inches.

The third planting in the chinch-bug sorghum resistance project was made June 1 and 2 and emergence was showing quite plainly on the 5th.

Considerable thinning of sorghum crops and corn was accomplished during the week.

Station visitors included Mr. F. A. Coffman and Mr. K. S. Quisenberry of the Division of Cereal Crops and Diseases on June 4, and 5, and about 15 local farmers on the 3rd.

WOODWARD:

The past week has been excellent for field work, and teams and tractors have been busy disking, spring-toothing and planting kafir.

Wheat has at no time suffered for moisture since it was planted. The occurrence of 1.90 inches of rain on the night of June 5 will insure its filling well. Heads are not as long as they sometimes are, and over this section generally yield of wheat will be uneven, due to differences in soil preparation, damage from a late freeze, and other factors. However, yields should be far above average.

Woodward, continued:

The extent of damage to trees of the March freeze is still uncertain. The Chinese elms and Chinese arborvitae suffered greatly, many of them only now putting out occasional leaves.

Dr. Karl S. Quisenberry and Mr. J. Allen Clark were station visitors during the week. Mr. Ladas, of Greece, has spent the past two weeks here studying station results and local agricultural practices.

Maximum temperature 97; minimum 47; precipitation, 1.91 inches.
Evaporation, 2.144 inches.

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REPORT FOR THE WEEK ENDING JUNE 13, 1931.

PENDLETON:

The work on the station the past week has been varied; roguing cultivating, and cutting hay, have been the principal tasks. The winter wheat in the roadways was cut for hay with a binder. Spring oats were sown on the rotation roadways. These oats will be ready to cut for hay in about ten days. The alfalfa and grasses in rows received a cultivation this week. The alfalfa in rows is staging a good come back, considering dry conditions and a fair second crop is in prospect. The alfalfa in six inch drills has not sent out much new growth.

The rainfall the past week amounted to .09 of an inch. This was of no value except for the fact that lower temperatures resulted for the remainder of the week.

All the spring and winter grains are still in good condition. Some of the winter barleys in the cereal nursery are ripe and have been harvested. The spring barleys are beginning to ripen.
Maximum temperature 96; minimum 37.

HAVRE:

The past week has not been a favorable one for this season of the year. Maximum temperatures ranged from 70 to 90 degrees and minimum from 49 to 58 degrees. Neither evaporation nor wind velocity were high. There were only two small showers, totaling .18 of an inch.

Small grains are making very little progress except where seeded on three years of fallow. Rotation No. 570 and one of the breeding nurseries have made very good growth. Winter wheat has all gone back during the week. Some of the plots are absolute failures. The best dates of seeding show less injury than other plots at this time.

It looks now as though the best yield of winter wheat would not go over 15 bushels even with the favorable conditions from now on. Most all of it is headed and the heads are very short.

Havre, continued:

Stands of corn are going to be a little uneven. Some of it is just emerging since the last rain. There will be practically no yield on domestic grasses and alfalfa will be quite short except that seeded last season.

Range grass is drying up except in localities where there have been showers. Conditions are quite bad in some sections east of here for both cattle and sheep men.

JUDITH BASIN:

All small grains made good growth during the week. Alfalfa, sweet clover and perennial grasses have made a fair growth but are beginning to need rain. Winter wheat, which has made excellent progress during the past three weeks, will need moisture within a few days if it makes a good yield. Native grass is growing very slowly and at present is not furnishing much feed for livestock. Cutworms are still doing some damage.

For the greater part of the week the weather has been cool. A sprinkle of rain fell on June 8. A heavy rain fell ten miles south of the station.

Corn was harrowed during the week, summer fallow was duckfooted and dead wood was cut from the shelter belt. The repair work on the station was continued during the week.

Maximum temperature 86; minimum 42; precipitation, .03 inch.

HUNTLEY:

The past week has, for the most part, been hot and dry and all crops have suffered accordingly. Spring grains have seemingly made no progress over that reported a week ago but many of the plots of winter grains in the variety test are now fully headed out.

With the exception of alfalfa in rows the pastures have deteriorated rapidly during the past few days. The hogs were weighed up and removed from the perennial pastures on June 11 while on the rye pasture the spring pigs were weighed up and the mature sows were removed.

Huntley, continued:

Field work has consisted of plowing fallow and green manure plots, cultivating corn, roads and alleys.

Maximum temperature 93; minimum 48; precipitation, none.

SHERIDAN:

Fallow was plowed during the week, and was harrowed after plowing. All corn, potatoes in the rotations, sorgo, and Sudan grass were cultivated with the rotary hoe. Green manure plots also were plowed and harrowed along with the fallow. A fair stand of rye, except for one plot, and a fair growth of peas were turned under. There was no sweet clover on the plots to be plowed. The condition of the ground for plowing was quite variable, some of it being quite dry and hard, while many of the rotation plots were wet.

Early varieties of barley and some of the winter wheat began to head. Brome and alfalfa are firing in spots, and all crops need moisture where the growth has been sufficient to use any amount of moisture. Alfalfa is beginning to bloom.

Pigs were weighed and put on pasture the first of the week.

Dr. C. E. Leighty and Mr. J. M. Stephens visited the station the 12th and 13th.

Maximum temperature 90; minimum 43; precipitation, .06 inch.

MANDAN:

Agronomy

Favorable weather prevailed for all field work during the week. Rain threatened on two or three days but little fell.

Corn was thinned and given the first cultivation during the week.

Small grains are looking good at present. Early forage crops have recovered to some extent from the drought, but the yield is likely to be light.

Maximum temperature 84; minimum 42; precipitation, .12 inch.

Mandan, continued:

Cooperative Grazing Experiment

Native vegetation has made a good growth during the past week. All pastures are in good grazing condition at present.

Repairs are being made to the corral fence.

Arboriculture

All boxelder, ash, caragana, Russian olive, Northwest poplar nursery fields, and the poplar cutting block, have been hoed during the week.

The preparation of inspection sheets and route maps for shelter belt inspection this summer, have been completed. Applications for plantings in 1932 have been received from 400 farmers in North and South Dakota, Montana and Wyoming. Recent letters from county agents in north eastern Montana indicate that due to the drought conditions of last summer and this spring, the farmers are not showing the keen interest in obtaining shelter belts which has been experienced in former years. In addition to the new applicants all 1917, 1922, 1926, and 1931 established shelter belts will be visited for the purpose of collecting information on growth, stand and hardiness.

Letters from cooperators in some sections of Montana show that severe winds this spring have covered some of the new tree plantings with dirt to a depth of three feet.

Blister beetles and canker worms have made their appearance during the week on seedlings and trees on the station. However, at present they are not in sufficient numbers to cause much damage.

Horticulture

The second spray of the season was applied during the week. A combination spray of lead arsenate, nicotine sulphate and lime sulphur was used. Red spiders have not been in evidence as yet so the glue spray which we intend to try for this pest, has not been used. Adult leaf hoppers are quite numerous on the grapes.

Mandan, continued:

Horticulture, continued.

Due to dry weather at planting time and after, a poor stand of strawberries has been obtained in the new strawberry test. Most of the raspberries have started growth in the new raspberry test, except Newman, which shows a very poor stand.

A fair set of fruit has been obtained from the hand crossing work in the greenhouse. We will probably have as many or more seeds as in any previous year. Cherries in the greenhouse are now ready to pick.

Land to be summer-fallowed has been plowed; orchard blocks have been given their first seasonal cultivation and hoeing; softwood cuttings have been made, and the apple trees have been gone over for blight. Potatoes are now coming up.

All planting and replanting has been completed on the grounds and in the gardens. A new lawn has been seeded back of the buildings. Tulips on the grounds have been dug and heeled-in. Weeding has been in progress.

Visitors of the week included Mr. H. L. Westover and Mr. C. R. Enlow, Division of Forage Crops and Diseases.

BELLE FOURCHE:

The week as a whole has been moderate in temperature, but the nights have been somewhat warmer than usual. A total of .88 inch precipitation was received in two heavy showers on June 10. Considerable run-off occurred, but sufficient moisture was absorbed by the soil to penetrate to a depth of over six inches.

Although the rain was of great benefit to crops, small grains were injured to such an extent by the previous dry weather that average yields will not be obtained even if conditions are favorable during the remainder of the season. Winter wheat on fallow continues to make a fair growth, but on other treatments the crop has commenced heading at a heighth of 8 to 12 inches, and the heads are abnormally small. Early seeded spring grain presents a ragged appearance owing to the uneven germination and lack of tillering. The plants which emerged early in the season are beginning to head at a heighth of 12 to 16 inches, but the plants which emerged several weeks later have made very little growth and are only a few inches high. Corn has made satisfactory progress, and sorgo appears to be well germinated. Potatoes are coming up.

Belle Fourche, continued:

Sweet clover and winter rye were plowed under for green manure early in the week. Sorgo and potato plots were harrowed, and all of the corn was cultivated.

Maximum temperature 93; minimum 43; precipitation, .91 inch.

ARDMORE:

The weather during the week was hot and sultry. There were showers on four successive days. The evening of June 9 a shower of .74 inch fell. This rain was of material benefit to small grain crops and wet the soil deeply enough for the germination of corn planted on May 19.

Early varieties of oats and flax were heading during the week.

The preparation of land for planting beans, millet and sorgo was completed and about 20 acres of sorgo were seeded.

Dr. C. E. Leighty and Mr. J. M. Stephens, of the Division of Dry Land Agriculture and Mr. W. H. Black of the Animal Husbandry Division were station visitors during the week.

Maximum temperature 96; minimum 42; precipitation, .96 inch.

ARCHER:

During the past week the weather has been very pleasant with a number of light showers totaling .28 of an inch. These showers did not greatly hinder field work, which consisted of seeding the last of the millet, beans and Sudan grass. The cultivation of the trees and the lining of the plots is in progress. The fallow plots have been plowed. The rye for green manure has also been plowed. Due to damage caused by cutworms, rabbits and squirrels it was necessary to re-seed the sunflowers in the dairy field.

Crops generally have grown fairly rapidly. Some of the winter wheat is beginning to head. The native grasses have seldom been better for this time of the year.

Maximum temperature 82; minimum 41; precipitation, .28 inch.

AKRON:

Cool weather with local showers prevailed during the week, though rains received at this station were inconsequential. Four different showers on as many different days netted only .25 of an inch. Other sections profited more as was evident from the condition of the roads observed on a trip to the Haxtun Community on Tuesday, June 9.

Crops are holding their own remarkably well. Prospects are bright for average yields of the early spring and fall seeded small grains. The station has seldom secured better stands of corn than those secured this year. Sorghums are emerging promptly, also.

The grain sorghum variety experiment was seeded early in the week, followed by the seeding of the soybean variety experiment, the silage corn as cornland preparation for next year's cereal variety experiments, and 10 acres of mixed grasses and 10 acres of sweet clover on pastures across the railroad. Open lands for later variety seedings, or for later date seedings were worked during the week. Considerable hoeing was also accomplished, though the weed problem has been of minor consideration thus far this season.

Dr. D. W. Robertson, of the Agricultural College, visited the station June 9 and 10.

June 10 was the occasion for a cattle feeding demonstration at the Finkner Ranch, near Akron, which drew livestock men from a wide region. This station was favored by a visit from Professor George E. Morton, Mr. H. B. Osland and Mr. Henderson, of the Agricultural College, Mr. George Wheeler, Managing Editor of the Western Farm Life, and Mr. O. O. Waggoner, of the Agricultural Staff of the Burlington Railway, on that day.

Maximum temperature 87; minimum 47; precipitation, .25 inch.

NORTH PLATTE:

Excellent growing conditions have prevailed during the week. All crops have responded to the rains of last week and to those which have come since. Spring grains which were showing the effects of drought are stretching up in heading so that in most cases it seems that there will be a good length of straw for harvesting. Winter wheat, except in the badly burned areas, have made a good recovery.

North Platte, continued:

Thunderstorms have been prevalent with frequent dashing rains. On the night of June 10, 1.16 inches of rain fell on the hill, while but .28 inch was measured at the buildings and .20 inch in North Platte. This storm caused some lodging of winter wheat on fallow and washed under listed corn in low areas.

Dr. C. E. Leighty, Mr. A. L. Hallsted and Dean W. W. Burr visited the station on June 8 and 9.

COLBY:

This week has been as favorable as could be hoped for, except in spots where it hailed. The rain of last week came hard and left the surface in excellent shape for the crusting and baking of the surface soil. On Thursday, June 11, a very gentle rain, that lasted at intervals throughout the day, was received. There was practically no runoff so that the soil is well soaked.

It has been moderately warm most of the week so that corn made rapid growth. The sorghums and Sudan grass are coming up to good stands. A thick stand of beans was secured, also. Field peas are beginning to bloom, and are making fair growth.

In spite of the favorable weather and moisture conditions at this time the outlook for the spring small grains and winter wheat is not improving. It appears that the late spring freezes have done considerable damage not at first apparent. At present it looks as though the spring wheat will not head at all, except scattering stems here and there. The oats and barley in the rotations are showing considerable white heads, and the barley, in particular, is heading very uneven. White heads are showing in all the fallow plots of winter wheat, and the continuously cropped plots are filling very unevenly. Nearly all heads have some grains filling well while some apparently are not filling at all. Some of the stools are rapidly getting weaker and many are dying. On the new project it looks as though practically all the wheat would die before harvest, except in the spots that were summer fallowed previous to 1926 to eradicate bind weed, and along the north border road.

Colby, continued:

The service clubs and the Chamber of Commerce of Colby, as well as some of the business men from the surrounding towns, had fried chicken lunch at the station, June 11. In spite of the rain which was particularly heavy during the noon hour about 90 men were present.

Maximum temperature 87; minimum 47; precipitation, .88 inch.

GARDEN CITY:

Thinning of some sorghum plots was started June 12. Most of the plots are up and are just large enough to begin thinning on. The dry weather the past week has so dried out the seed bed on some of the plots that the stand is very uneven.

Wheat has matured quite fast. The straw is turning brown and firing badly on many of the plots. Some fallows are lodging in places. At the present time it looks like wheat harvest will start on the dry land station in another ten days.

Rain has fallen on three days of the past week. On June 11 and 12 two small showers were recorded which were of no value to crops. Friday night, June 12, .95 inch of rain fell. This is going to help greatly in completing germination of sorghum plantings and possibly aid in filling the wheat some.

Considerable weed hoeing and cultivation has taken place the past week.

Maximum temperature 97; minimum 48; precipitation, 1.13 inches.

HAYS:

The first half of the week was generally clear and warm. The last four days have been partly cloudy with occasional threatening storms hanging around, resulting in light showers ranging from .14 to .26 inch per day, most of the rain falling during the night with hot sunshine some time during the day, which is not good for the wheat.

Corn is about four inches high, generally a good stand on all plots.

Hays, continued:

Milo is showing a good stand where planted with furrow opener planter on plowed ground, but very poor on listed ground. The soil dried out before the seed germinated.

Kafir, like milo, is good on plowed ground where planted with the furrow opener planter. The ground turned rougher and the stand is thinner where the listed ridges were split, and poorer where the stubble was only disked before planting with the lister. On the ground receiving no tillage before planting with the lister, especially wheat stubble land, there is practically no stand. The soil dried out before the seed could germinate. It is hoped the recent small showers may yet germinate the seed.

Oats and barley are all in head about 18 to 24 inches high and look very good except a little thin. The oats sown in roadway last fall, referred to in previous reports, are mature at a height of about 30 inches and look very fine. Spring wheat is about two feet high and heading. It is more or less ragged in appearance and with the ground now pretty well dried out prospects for it are not very encouraging.

Canada field peas are about 15 inches high and in bloom.

Bromegrass sod has made a better growth of seed stalks than usual and will make a little hay this year, perhaps a quarter ton per acre. It will be mown to-day, June 13.

Alfalfa is about 10 to 12 inches high and has made all the growth it can, as the soil moisture is apparently used up, and the alfalfa is drying off. It will also be harvested to-day.

Winter wheat varies greatly in both thickness and height. On fallow it made a growth of from 3½ to 4 feet, but much of it is now lodged and tangled. Frequent lodging has already materially reduced the yielding capacity until the wheat on fallow cannot yield more if as much as many of the well prepared, continuously-cropped plots. The wheat stubbled-in, that sown on late prepared ground, and that drilled in kafir stalks, is the poorest, being thin and short. It looks now like there will be little difference between yields from plots worked first after harvest with the plow, lister, Killifer chisel or one-way disk. The wheat on the plowed ground is not quite as tall, has a little shorter head but is a little thicker and a little farther advanced than the wheat on the listed, one-wayed, and

Hays, continued:

chiseled plots. The wheat on these plots averages about three feet high. Most of the wheat is now in the soft dough stage. Present prospects indicate the wheat yields on the project may range from five to 25 or 30 bushels per acre.

Dr. C. E. Leighty visited the station June 1, 2, and 3.
Messrs. Wagner and von Trebra visited the station June 1.

TUCUMCARI:

The past week has been favorable for field work and for crop growth. Precipitation for the year to date is about 2½ inches above normal, so where satisfactory stands were procured growth for some time should be favorable. Beating rain, with some hail, however, caused poor stands to result over much of the county, while this is also true to some extent on the station.

Work of the week consisted of cultivating, mowing fence rows, roadsides, and grounds, and work on young trees.

Mr. L. M. Starr, graduate student at Lubbock, Texas, Tech, arrived the middle of the week for work under appointment of Division of Cereal Crops and Diseases.

Wheat prospects over the county are excellent, with but little hail damage. Average yields are being estimated from 20 to 28 bushels for the county. Station wheat plots have ripened fast the past week, should be ready for harvest in a week, and yields should average not less than 25 bushels. Rye plots are promising good yields.

Maximum temperature 92; minimum 51; precipitation, .11 inch.
Wind velocity, 5.0 miles per hour; evaporation, 2.119 inches.

DALHART:

Weather conditions remained favorable for field work throughout the week. Planting and miscellaneous cultural treatments occupied most of the time during the week. Planting of all rotation plots and miscellaneous increase fields was completed. The last date of planting cotton was made on June 10. All plots planted during the preceding week have emerged to excellent stands; it was not necessary to break the crust for emergence.

Dalhart, continued:

Winter wheat is just about fully filled with a few plots starting to ripen. Winter rye is also starting to ripen. Barley is in the soft dough stage and oats are just fully headed.

It was necessary to cut the sweet clover plots during the week. The army worm was starting to damage some plots severely and most of the plots were sufficiently advanced for cutting. Poisoned bran was distributed but only a fair kill was secured.

The planting on the station is completed with the exception of the last dates of planting for the sorghum varieties and for the last date of planting for the sorghum nursery. It is believed that sufficient moisture is in the soil to insure germination.

The orchard, vineyard, and miscellaneous tree plantings were cultivated during the week. All corn plots and corn varieties were thinned during the week.

The week was characterized by relatively low average wind velocities; an exception to this was a very high wind for about one hour starting at 9 o'clock the evening of June 8. There was a large sand movement at this time that burned the leaves of cotton, corn, and sorghums. The corn has fully recovered from this injury but the cotton and sorghums, slower in growth at this time of the year, still show blackened and burned leaves.

Maximum temperature 92; minimum 50; precipitation, .13 inch.
Wind velocity, 4.8 miles per hour; evaporation, 1.871 inches.

BIG SPRING:

Weather conditions during the past week have been very favorable for field work and for growing crops generally. Two or three attempts at rain have been made during the week, but most of them have blown over with only a total of .25 inch being received. This merely wet the surface of the soil. Soil moisture samples taken on the M.C. milo plots show good moisture conditions through the fourth foot.

The winter wheat plots were harvested during the week. The straw was so short that it was necessary to mow and rake the wheat. Two planters have been kept busy during the entire week planting milo and sumac in the leased field.

Big Spring, continued:

The early dates of planting cotton and sorghums have been thinned and cultivated as have also the May 15 date of planting of grain and forage sorghums.

Maximum temperature 105; minimum 70; precipitation, .25 inch.

LAWTON:

Harvest of all small grains, except a few plots of late oats, was completed June 13. The remaining plots of oats will be harvested on the 15th. The majority of farmers throughout the county are harvesting with binders this year, and the work is pretty well completed. Combines will be in operation between the 15th and 20th.

Thinning of sorghum crops progressed steadily during the week and cotton chopping will follow immediately.

Threats of rain that appeared almost daily resulted in showers that were local within the county or adjoining counties. A few localities have reported destructive hail storms. Station records include but one shower of .14 inch. The maximum temperature for the week was 98.

WOODWARD:

The weather the past week has been very good for field work. Some of the barley varieties have been cut, and most of the grain sorghum varieties have been planted. Many farmers have called at the station for seed of milo and feterita, earlier stands having been washed under.

Most of the plantings in the tree nursery are showing good stands.

Wheat is still without damage or deterioration and will give a heavy yield. Harvest should start within a week. Very light showers occurred on four days of the week. A hail storm of a few minutes duration occurred on June 12. Hailstones punctured many car tops, but were too few in number to damage crops.

Dr. N. E. Winters and Professor C. B. Cross, of Stillwater, and Mr. C. O. Johnson, of Manhattan, were station visitors on the 13th.

Maximum temperature 92; minimum 59; precipitation, .24 inch.

Evaporation, 2.157 inches.

NOTE:

Under date of June 10, Dr. W. A. Taylor, Chief of Bureau of Plant Industry, issued B.P.I. Memo. 587, reading, as follows:

"Occasionally our attention is called to cases where an employee of the Department has indorsed or otherwise praised equipment used by a particular concern or made comments on the quality of products sold by some concern. Frequently comments of this character find their way into newspaper advertising by the manufacturer of the equipment or supplies.

"Statements of the character described above are, of course, entirely improper. It is imperative that employees of the Bureau, regardless of the capacity in which they serve, must at all times take an impartial attitude toward equipment and supplies manufactured by commercial concerns. This is particularly true in connection with concerns with which we cooperate and regarding equipment or supplies we may use in our experimental work. The maintenance of cooperative relations depends to a large extent upon our being impartial. Please see that the employees of your Division are instructed that no statements or interviews may be given which might be construed as indorsing any particular firm or its products. Any request of this character should be referred to the Chief of Bureau for consideration."

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WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

June 20, 1931.

Not for publication without
prior consent of this division.

REPORT FOR THE WEEK ENDING JUNE 20, 1931.

HAVRE:

The past week has been very unfavorable, especially for this season of the year. On June 15 and 16, a maximum temperature of 99 degrees was recorded each day. On the 17th there was an unusually high wind for the 24 hours ending the morning of the 18th. The wind velocity averaged 22.9 miles per hour, which is 2.9 miles per hour higher than we have ever recorded at this station. The evaporation for this day was .690 inch. There have only been a few days since the station started when there was more than .500 inch evaporation. The highest previous evaporation that we have recorded was .511 inch. There were only two light showers totalling .06 inch during the week. The last two days have been cooler with indications of rain.

Crops are all making very slow progress. Spring wheat is starting to boot. Some of the early varieties are beginning to head. Many of the plots on spring plowing are almost dead. Good fallow could make a fair yield yet with plenty of rain and cool weather. Corn is making slow growth but has improved especially in stand during the last week.

Mr. H. L. Westover and Mr. C. R. Enlow, of the Division of Forage Crops and Diseases, were visitors at the station during the week.

Maximum temperature 99; minimum 44; precipitation, .06 inch.

JUDITH BASIN:

Strong winds with high temperatures on June 15 to 17, inclusive, were very detrimental to all plant growth. Winter wheat and spring grain seeded on fallow and corn ground have held their own during the week and have made some growth. On the other hand spring grain seeded on fall or spring plowing have deteriorated. Alfalfa and perennial grasses are at a standstill and unless rains come within a few days it will be necessary to cut them. Pastures are becoming very dry. A light shower of .20 inch fell the night of June 14 but the hot winds of the following day dried out this moisture within a few hours.

Judith Basin, continued:

Corn was cultivated, fallow was duckfooted and the cleanup work being done in the old shelter belt was completed during the week.

Station visitors during the week were Messrs. H. L. Westover, L. W. Kehpart and C. R. Enlow, all of the Division of Forage Crops and Diseases.

Maximum temperature 94; minimum 41; precipitation, .20 inch.

HUNTLEY:

High temperatures and hot winds during the first half of the week were injurious to all crops. Spring grains that were beginning to come out of the boot during that period show the upper parts of the heads dried out white. Stands of beans, sorgo and Sudan grass have increased during the week but corn remains about the same. Reseeded plots of small grain show no sign of the crops coming up as yet.

Plowing of fallow land and the green manure plots was completed on June 17. Most of the plots to be maintained as fallow broke up in fair condition and worked down well whereas the green manure plots were very dry and cloddy.

Station visitors included Dr. C. E. Leighty, Messrs. J. M. Stephens and R. S. Towle, of the Division of Dry-Land Agriculture, Director Linfield, of the Montana Station, and Messrs. H. L. Westover and C. R. Enlow of Forage Crops.

Maximum temperature 105; minimum 49; precipitation, trace.

SHERIDAN:

Extreme heat together with high winds for this section caused grain to fire badly the first of the week, the firing continuing throughout the week, although cooler weather prevailed over the last three days. The condition of the crop at present is the poorest for the same stage of growth since 1919. Crops which have not reached the stage where any great amount of moisture has been used, such as corn and late forage, made a fast growth. Flax and proso reseeded last week emerged with a good stand. The flax plots that were left without reseeding are becoming very weedy.

Sheridan, continued:

All alfalfa and mixed grass and alfalfa was cut during the week. Hay yields were very light, ranging from nothing that would rake up with the hay rake with some plots of brome, to 1960 lbs. per acre for the best plot of alfalfa, with the average hay yield under 1000 lbs. per acre. All of the alfalfa was gotten up in good condition, no rain falling during the week.

The meadow in Field K, where there was some killing of the grass, and where downy brome grass has come in thick this year, was plowed and disked, after cutting the crested wheat grass. This was the only grass there making sufficient growth to cut for hay, brome and orchard grass being a complete failure, and meadow fescue killing out almost completely.

Cultivation of corn was begun June 19.
Maximum temperature 101; minimum 45; precipitation, none.

DICKINSON:

Dry, hot weather early in the week, accompanied by strong winds on three days dried out and burned grain crops badly. A maximum of 106 was recorded on June 16. Cooler weather at the end of the week, with a shower of .09 inch on Saturday morning, freshened things up a little.

A few plots of wheat on corn ground and fallow have a fair appearance but the stand is thin and the plants are beginning to head at about a foot in height. Rye is short and thin and some has been cut for hay, and some fields are being pastured in the locality. Pastures are badly dried out and are furnishing almost no feed.

All row crops on the station were cultivated during the week. Corn on the rotations was thinned.

Mr. H. L. Westover, Senior Agronomist, and Mr. C. R. Enlow, Associate Agronomist, Division of Forage Crops and Diseases, U. S. Department of Agriculture, visited the station June 15.
Maximum temperature 106; minimum 50; precipitation, .09 inch.
(A rain of 1.58 inches fell during the early morning of June 21, ending one of the most severe early-season droughts during the history of the station.)

MANDAN:

Agronomy

The past week has been hot and dry. Small grain on most plots started to fire.

Part of the forage crops have been cut; listed corn was given the first cultivation.

Hot winds occurred on two days.
Maximum temperature 99; minimum 49; precipitation, none.

Cooperative Grazing Experiment

Native vegetation started to fire badly during the week. Pastures that appeared in first class condition a week ago are now brown in many spots Cattle appear to be putting on good gains.

Repair work has continued on fences and on the corral.

Arboriculture

Hoeing of species testing blocks and shelter belt combinations has been completed during the week.

Conifer and caragana seedlings have been irrigated. Two-year caragana seedlings and part of the hedges have been sprayed against blister beetles which are doing considerable damage to new growth.

All nursery stock is badly in need of moisture. The intense heat and hot winds have damaged the tops of many of the seedlings.

Horticulture

Golden currants were sprayed with nicotine sulphate and fish oil soap on June 17, as they were badly infested with aphids.

Cultivating and hoeing has been in progress in the orchards throughout the week. Potatoes were also cultivated. Good stands of the latter crop appear to have been secured.

Horticultural crops are again in need of rain as the weather has been hot and dry.

Mandan, continued:

Horticulture, continued.

The hedges in the testing block and about the grounds were trimmed during the week. All species are in fair condition and have made good growth during the spring. The Chinese elm is still very promising as a distinctly ornamental and rapid growing hedge, suitable for screening off unsightly places or objects. The Ribes diacantha also holds promise as the dwarfest hedge in the test. It may perhaps become a substitute for privet in northern states.

There is a noticeable absence of bloom about the station grounds at the present time, due no doubt to late freeze in the spring. Mock orange, ninebark, hybrid rugosas, villosa and josekea lilacs, and a few peonies, are producing a scattered patch of color here and there.

All vegetable fields were cultivated and hoed during the week. The individual crops are still holding their own, but growth is almost at a standstill. The cutworm pest, unusually severe this season, is still taking toll of plants, especially melons.

On June 15 about 150 farmers and their families visited the station. This party was assembled through the efforts of the Prairie Farmer of Chicago, and were on their way to Yellowstone Park. The farmers were mostly from Indiana, Illinois, Wisconsin, and Minnesota.

About 50 boys and girls from Morton and Grant counties, visited the station on the 18th. These young folks were in the Farm camp at Mandan under the direction of the County Agents.

The First Annual Indian Service Conference for North Dakota was held at the Indian School, Bismarck, N. Dak., on June 18, 19, and 20. About 25 to 30 Supervisors, Extension Agents, Superintendents, and Farm Agents, were in attendance. On the 19th the party visited the station and were conducted over the different projects. On the 20th the cooperative grazing experiment was visited. Mr. A. C. Cooley, Director of Extension and Industries, Mr. F. C. Campbell, Supervisor of Extension, Mr. J. T. Montgomery, Supervisor of Livestock for the Indian Service, Mr. L. C. Lippert, Agricultural Extension Agent, were in attendance at the conference. Several members of the station staff were on the program for short talks.

BELLE FOURCHE:

Abnormally hot weather prevailed for a few days during the middle of the week. A maximum temperature of 103 degrees occurred on June 16, which is third to the highest on record for June at this station. No precipitation was received, but strong,hot winds caused an excessive amount of evaporation and did extensive damage to early seeded crops.

All small grains have burned badly, except where seeded on fallow. Spring wheat, oats, and barley are making an effort to head, but a number of plots evidently will be almost total failures. Flax is commencing to bloom, but is wilting from lack of moisture. White sweet clover and field peas are drying up without blossoming. Corn and potatoes have made a good growth, but rain will be needed in the near future for these crops as moisture is present only in the first foot of soil. Sorgo has emerged with fair stands on the various plots.

Field work has consisted of hoeing alleys, removing large weeds from outside rows of grain plots, and cultivating corn, sorgo, potatoes, alleys, and roads. Bromegrass, sweet clover, and alfalfa plots were mowed. No hay will be obtained from alfalfa, and sweet clover and bromegrass are near failures.
Maximum temperature 103; minimum 49.

AKRON:

Excessively hot weather prevailed over the early part of the week which took its toll from prospective small grain crop yields. Weather is cool to-day, June 20.

Soybeans seeded in the variety experiment last week are emerging.

Work for the week included the seeding of the bean variety experiment, the cultivation of the rotation and the rate and spacing corn, the trimming of the corn plots to regulation length preparatory to thinning to uniform stands, harrowing and leveling land for millet variety experiments and for Sudan grass on the forage variety ground, the seeding of regular date of seeding experiments, cultivating the orchards, and the hoeing of weeds.

The station ewe flock of seventy individuals was clipped during the week. Pasture pigs were weighed and turned from the rye pasture to the barley pasture.

Akron, continued:

Tamarix Amurense is in bloom this week, nearly two weeks later than normal.

Mr. H. B. Osland and Mr. Henderson visited the station during the week in the interest of animal husbandry work. Mr. T. S. Stanton and Mr. W. J. Sando visited the station June 19 and 20. Northeast Colorado Editorial Association, meeting in Akron, visited the station June 20. Professors Kezer and Hockinsmith, Dr. Robertson, and Mr. T. G. Stewart, on a tour of the winter wheat sections of Northeast Colorado, stopped at the station a short time Wednesday afternoon, June 17. They reported finding much winter wheat damaged with what they diagnosed as Helminthosporium Foot Rot.

Maximum temperature 96; minimum 49; precipitation, .03 inch.

NORTH PLATTE:

The week has been hot and dry. Crops have made good growth, but at the expense of a considerable reduction in soil moisture. All small grains are in full head. Corn on the station, except some late replants, is from one foot to eighteen inches in height. First cultivation has been completed on all fields.

The chief station activities during the week have been the completion of putting up the first crop of alfalfa, plowing fallow, cultivating corn, working down roadways and setting stakes in preparation for Crops Day on June 25.

COLBY:

The week has been hot and dry. The small grains are ripening faster than normal. The corn and sorghums are making rapid growth. The spring wheat shows only scattering heads, with most of the plants gradually dying.

The corn was cultivated for the first time, the late plowed fallows were plowed, the field peas turned under, and the fallow plots that had been previously plowed or listed were worked with a duckfoot cultivator, or in the case of listing, the ridges were leveled during the week. Weeds were just starting since the rains of a week ago. All the plots showed an abundance of moisture except those where there was a heavy growth of volunteer wheat and where the peas were turned under for green manure.

Colby, continued:

About 150 farmers and their wives attended the third annual farm viewing day at the station, June 17. Among other visitors were Dean Call, Professor Throckmorton, Dr. Sewell, and Dr. Gainey, all from the main station at Manhattan. Mr. A. F. Swanson, in charge of the Cereal work at the Hays Station, Dr. Painter, Entomologist from Manhattan, and Mr. Mackindoe, an Australian studying in this country, also visited the station this week. Maximum temperature 97; minimum 60; precipitation, none.

GARDEN CITY:

Work the past week consisted of hoeing weeds out of roadways, cleaning up and general routine. Some thinning was done on plots that were up to good stands. Since the rains of last week, much of the plantings that did not come up well have germinated and are coming through to fairly good stands.

Wheat is ripening rapidly and is ready to bind. All sorghums that were well up from the first planting are growing rapidly.

Temperatures until the last part of the week were seasonal. On the 20th the maximum recorded for the past twenty-four hours was 103. Minimum temperature for the week 57; precipiation, .03 inch.

HAYS:

All small grain crops are now ripening very rapidly except the spring wheat, which is apparently about two weeks behind other small grain, and is still very green. Winter wheat on the early fall plowing is the most advanced and would now harvest nicely with binder. It will, however, be about a week before it will be dry enough for combining. The wheat is a little thinner and a little greener where the ground was prepared with a lister, one-way disk, disk, chisel and duckfoot. All these preparations are about at the same stage. On fallow the wheat is down and still green and will make very disappointing yields again this year.

Oats and barley are quite even and nice except for the fact that barley is not as thick as it should be for the best yields. These crops will be ready for the binder within a few days.

Hays, continued:

Canada field peas had reached a height of about two feet and were plowed under for green manure June 17. M. F. fallow for winter wheat was also plowed the same day. Wet soil prevented these being plowed June 15.

During the week all the corn plots were cultivated, and all kafir planted with furrow opener planter was harrowed. Thinning of sorghums was continued at intervals. This work is practically finished except on a few plots where germination was slow. A good stand was secured on the sorghum plots except where planted with a lister without any previous work, and where at planting time the ridges were split with lister. The stand is not very good where the ground was disked early to destroy volunteer wheat and listed at planting time, (Rotation 509).

Hay crops, alfalfa and brome on Rotations 142 and 141 were harvested during the week. The yield of alfalfa was about normal for upland and bromegrass was considerable above normal. Brome developed a larger number of seed stalks than usual.

Maximum temperature 97; minimum 58; precipitation, none.

TUCUMCARI:

The week has been hot, dry, and calm, excellent for accomplishing field work. Wheat and rye plots were harvested, all plot ends staked and trimmed, the late date of grain and forage sorghums and broom corn planted, and considerable cultivating on increase land performed. Evergreens were sprayed to combat spider attack, while orchard and tree rows were springtooth harrowed.

Thinning was begun the middle of the week and the variety corn plots, the early planting of grain sorghums, and the center field plots of kafir, corn, milo and sorgo have been completed.

Although precipitation is approximately two inches above the 26-year average for the year to date, three weeks of warm weather have dried the surface soil to considerable depth and crops would respond to additional moisture. Wheat on the plains section of the county is ripening fast and harvest will be well under way next week. With a few exceptions, hail damage this year has been light. Much replanting has been necessary in this section, due to beating rains in May, so the majority of row crops are very small and somewhat late.

Maximum temperature 101; minimum 53; precipitation, none.
Wind velocity, 3.6 miles per hour; evaporation, 2.430 inches.

DALHART:

The weather has remained hot and dry during the week. Field operations have included chiefly thinning and cultivating. The thinning operations are only well started but are about as far advanced as plant growth will permit.

Some difficulty, due to rapid drying of the surface soil, has been experienced in getting stands on some of the later dates of seeding. If a rain should come soon it would still permit good emergence.

Winter wheat and rye are fast reaching a ripe straw color but the grain is still soft. Yields of late varieties and of late sown wheat will undoubtedly be lowered by the excessive temperatures and the resultant high evaporation.

The last date of planting of the sorghum varieties was made on June 15. Emergence is well started and apparently excellent stands will be secured for this date of seeding. The last date of planting for spacing and the sorghum nursery was made on the 17th.

The surface soil is getting to be very dry and on the cropped land the subsoil is likewise very dry. Native grasses and weeds in native sod are drying up fast.

Maximum temperature 101; minimum 56; precipitation, none.
Wind velocity, 4.9 miles per hour; evaporation, 2.457 inches.

BIG SPRING:

Weather conditions during the past week have been very unusual and rather disastrous in many parts of the county. On the night of June 14 the worst sandstorm of the year occurred. Although it only lasted about two hours, it is estimated that more than 10,000 acres of cotton and feed crops were destroyed during that time. Soil blowing so late in the season is rather unusual, and cotton destroyed now can only be replaced with feed crops. On the afternoon of June 18 a hail and light rain occurred; this did considerable damage in certain sections. The station was rather fortunate in that only a small area of the leased field was injured by soil blowing. This was immediately replanted.

With the exception of a few late dates, station planting was completed this week. This week's planting consisted of the June 15 date and variety planting of grain and forage sorghums and cotton. Sumac sorgo in the rotations and increase fields was also planted. The rotation field was staked and the roadways trimmed; this makes the plots in this field ready for thinning Corn in the rotations and the cotton varieties were thinned during the week.

Maximum temperature 102; minimum 65; precipitation, .28 inch.

LAWTON:

Such row crops as cotton, and especially corn and sorghums, grew rapidly and vigorously during the week. Corn has probably received the last seasonal cultivation, unless one-horse tillage becomes necessary in July.

Cotton is making a normal growth. A little injury by termites is noticeable and a few reports of localized damage by grasshoppers are received.

Early maturing sorghums such Pink freed, Ajax, and Feterita x kafir x kafir that were planted April 15 are starting to boot. The infestation of chinch bugs to date is light, and there is considerable probability that nearly everything in the April 15 planting will mature a fair to good crop under seasonal conditions. A few of the second brood of chinch bugs are present, and there is considerable overlapping between the first and second broods.

Cotton chopping will be completed within two more days. The only sorghum thinning that remains is confined to the third planting in the chinch bug resistance project.

Considerable wheat came to the elevators from the combines the past week and a few threshers are in operation. Local markets for wheat, oats and barley have been 40, 15, to 17 and 20 cents, respectively.

A local shower of .60 inch during the week was highly beneficial to all of the row crops. Grass lands remain very dry, and pastures are short and weedy. Maximum temperatures for the week varied from 85 to 97.

WOODWARD:

The past week has been characterized by high winds and fairly high temperatures. For this reason the ripening of wheat has been rapid. It has not, however, been accompanied by shrinking of the kernels, as is sometime the case under similar circumstances.

Much of the wheat on the station has been harvested during the week. Weather conditions have been such this year as to bring out far more than usual the individualities of various varieties such as black hulls, purple stems, etc.

Planting of sorghums, cowpeas, etc., on the station was almost completed during the week. A great deal of milo seed was sold to farmers for replanting, due to destruction of stands by rains. Considerable milo is being planted in areas which have been hailed. There has been much demand for seed of some early maturing sorghum such as feterita.

Maximum temperature 97; minimum 63; precipitation, .54 inch.
Evaporation, 2.030 inches.

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WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

June 27, 1931.

Not for publication without prior consent of this division.

REPORT FOR THE WEEK ENDING JUNE 27, 1931.

JUDITH BASIN:

A shower of .50 inch the fore part of the week was of some benefit to crop growth, although high temperatures the last two days of the week dissipated most of the moisture that fell. Small grain seeded on summer fallow still looks good and with good rains should produce average yields. Crops on spring and fall plowing do not look very favorable. The straw is very short and the number of culms per plant are few. Russian thistles are numerous on such types of seed bed preparation and are making a rapid growth. Cutworms are still doing considerable damage, especially to corn.

Considerable replanting of corn has been done on the rotations. Harvesting of alfalfa hay was started during the week. Yields are very small and it is difficult to do a good job of cutting.

Maximum temperature 93; minimum 39; precipitation, .50 inch.

HUNTLEY:

The dry weather has continued throughout the week. Fairly high day-time temperatures have been followed by rather cool nights and plants that appear to be badly wilted during the day revive before morning. On one or two days hot, gusty winds have raised clouds of dust which have covered vegetation and given it a grayer color than is normally attributed to drought.

Winter wheat that has been left to mature is rapidly "drying" ripe. Fields that looked quite green a week ago have turned yellow during the last few days. The acreage to be harvested will be small as many farmers in this locality have long since turned stock into their fields to pasture the crops.

Field work on the dry-land project has consisted of cutting alfalfa and tractor plowing a block of plots comprising the old alfalfa and bromegrass hog pastures. This ground was packed and dry and broke up in a very cloddy condition.

Maximum temperature 99; minimum 45; precipitation, trace.

SHERIDAN:

Crop conditions deteriorated steadily during the week. The only small grain plot not firing badly at present is the wheat in Rotation 570, which was fallow for three years. Great difference in the amount of firing is shown also in the time of plowing for fallow, plowing in the fall for fallow showing the least firing, and the late-plowed fallow, plowed about a month after the regular time for plowing for fallow in the rotations, showing practically as much firing as where small grain or corn was grown last year, with a steady gradation in the amount of firing for the different dates of plowing in between. Rain probably would be of little benefit now for most small grain outside of fallow, although it might help some of the winter wheat. Corn and late forage are still in good condition, and made a fast growth during the week. Corn is wilting badly during the day however.

The station field day was held to-day, June 27, with an attendance of between 600 and 700 people. Two yearling steers barbecued on the station were consumed by those present.

Maximum temperature 101; minimum 48; precipitation, none.

DICKINSON:

The rain of 1.58 inches recorded on June 21 was followed by four other showers, making a total for the week of 2.50 inches, and for the month to date of 2.97 inches.

The crop outlook has greatly improved as a result of the rainfall. Some feed seems assured and later rains could still make an average grain yield. Corn, potatoes, and other row crops have made rapid growth.

Considerable washing of cultivated fields resulted during the heavy rain. Drainage ditches down two of the rotation roadways, where most washing occurred, have been lined with rock or brick.

A seeding of the main crops was made on June 25 to determine the yields from late seeding. This included one or more varieties of each of the following crops: wheat, oats, barley, flax, millet, cane, Sudan grass and corn.

Weeds developed rapidly during the week. As much as possible was cultivated but considerable work remains to be done.

Painters were busy during the week on the station buildings.

Mr. E. G. Schollander, Superintendent of the Williston Substation, and Mrs. Schollander visited the station on the evening of June 24.

Maximum temperature 95; minimum 48; precipitation, 2.50 inches.

MANDAN:

Agronomy

The past week has been favorable for field work. A good rain amounting to .92 inch, fell on the morning of June 21. This rain was of much benefit to all crops.

Some of the small grains that had started to burn are now looking better.

Most of the field work during the week consisted of weeding, as the teams were busy on road repairs.

Wheat is starting to head.
Maximum temperature 95; minimum 47; precipitation, 1.11 inches.

Cooperative Grazing Experiment

Native vegetation which had started to dry up was revived by the rain and now looks better than last week. The steers appear to be putting on good gains.

Repairs to the corral continued during the week.

Horticulture

The warm weather is hastening the ripening of the currants. It is thought that they will be ready to pick about July 1.

The orchards and nurseries have been cultivated and hoed for the second time this season. However the rains and warm weather have induced a new crop of weeds to start, so a third cultivation will soon be necessary.

Seedling crosses that germinated this spring are now being transplanted from the seed flats.

Considerable pruning of tree groups about the grounds was done during the week, all roads were trimmed and hoed, and the grounds in general given a good grooming. Peonies, Elder and Mock Orange, are at present in bloom. Perennial borders containing Gypsophila, Coreopsis, Gaillardia and Lilium unbellatum, are also in bloom.

Mandan, continued:

Horticulture, continued.

Thinning of various vegetable crops in the field, especially in the breeding projects, has been in progress during the week. There is a very good stand at present of watermelons and muskmelons, and a fair stand in general of sweet corn and tomatoes.

On June 24 between 400 and 500 farmers visited the station. County Agent Newcomer, of Morton County, and County Agent Putman, of Burleigh County, arranged for the farmers of their respective counties to inspect the station. The visitors were conducted over the station and had a chance to see the various projects conducted here. The noon hour was spent at Riverside Park, between the station and Mandan.

BELLE FOURCHE:

Unusually hot weather prevailed during the greater part of the week. Maximum temperatures of 105 degrees and 104 degrees occurred June 23 and June 26, respectively, and a strong, hot wind accompanied the excessively high temperatures. The minimum temperature on June 26 was 72 degrees, which is the highest daily minimum temperature on record for June at this station. No precipitation was received, aside from one light shower which was hardly heavy enough to settle the dust.

Small spring grain has been unable to completely head and will be practically a total failure on all cultural treatments except summer fallow. Spring wheat, oats, barley, and flax on fallow are commencing to burn, and the yields will be light. Winter rye is nearly ripe, and winter wheat is fast turning color. Corn has been curling badly, and potatoes are wilting. Sorgo is the only crop which has not suffered from the dry, hot weather, and is making a rapid growth.

Field peas were plowed under for green manure, but there was very little green matter to turn under. Thinning of corn and sorgo was completed, and corn and potato plots were hoed.

Mr. D. A. Spencer, of the Animal Husbandry Division, visited the station for a few days during the week.

Maximum temperature 105; minimum 57; precipitation, 04 inch.

ARDMORE:

Intense heat combined with low humidity and an almost total absence of precipitation, united to make this week one of exceptional severity on crops Grains on all methods of cultivation are firing badly. Some plots are still in condition to make afair yield provided conditions improve at once. The yield on most plots will be very low regardless of future conditions. A continuation of the type of weather now prevailing will cause a total failure on many plots.

Cultivated crops are making seasonable growth though corn has been wilting to some extent during the hot part of the day. The stand of corn is uneven due to germination of seed at two periods. All plots of sorgo have a good stand.

From present appearances, this section is likely to suffer one of the most severe feed shortages in years. Practically all upland alfalfa is too short to cut, and there are very few places where native grass has made enough growth to warrant cutting. Some grain is being cut for hay, and more of it will probably be cut.

The temperature was above 100 degrees on three days during the week, the maximum being recorded on June 23, when the temperature reached 105 degrees This is the hottest June day on record at this station.

The water situation at the station is becoming critical. Hat Creek, sole source of the station's water supply, ceased flowing on June 24. We were able to fill the storage cistern before the creek ceased flowing, but when this supply is exhausted, we must begin hauling water unless rains cause the creek to resume flowing.

Shingling of the horse barn and machine shed has been completed, and work started on the office building.

Maximum temperature 105; minimum 58; precipitation, .03 inch.

AKRON:

Extremely hot weather characterized the past week with almost daily local showers. Maximum temperature was above 90 degrees six of the past seven days. This station received moisture from three of these showers, which totalled only .62 inch -- totally inadequate for the needs.

Akron, continued:

This is near the end of the month of June and to date there has been only 5.43 inches of rainfall over this nearly completed portion of the first six months period; the 22-year average rainfall for the same period is 9.11 inches.

Small grains, particularly the spring seeded, are suffering sharply for moisture. Corn is finding sufficient moisture for immediate needs and has made rapid progress during the warm weather of the past week. Surface planted corn on the rotation plots now stands uniformly knee high while the listed-in corn is much smaller - the contrast at this date is very marked.

The first 'Crops Field Day' ever attempted by this station was held Wednesday, June 24, with a good crowd attending, representing the entire northeast Colorado region. Some two hundred and fifty farmers and wives were ushered by the experiments chosen for object lessons. Much interest was shown at each of the five stops. The station staff was aided by the following college officials: Dr. D. W. Robertson and Mr. T. G. Stewart, of the Agronomy Department, and Messrs. Geo. E. Morton and H. B. Osland, of the Animal Husbandry Department. Much credit is due the Colorado Agricultural College for the success of this the first 'Crops Field Day' at the Akron Station.

Grasshoppers are proving a real menace to crop experimental work at this station this year, particularly to those rotation plots lying along the west side of the experimental field. This side of the experimental field is bordered by a commercial field that was allowed to grow to weeds during the later part of last season and thus far this season. This ground proved a veritable hot bed of infection, which threatened to overwhelm the station plots adjoining. Hopperdozer has been run over this ground almost every morning the past ten days and poison bran is being applied every third morning to the rotation plots. At the end of this the first ten days of the fight the issue seems to be about a draw. Both the hopperdozer and the poison bran are effective but it appears that two hoppers appear for every one destroyed.

Other work accomplished was the thinning of the rate and spacing, the corn variety, and the rotation corn plots. Rotation fallow plots are being spring-tooth harrowed to-day, June 27, for the first time since they were plowed late in May.

Maximum temperature 99; minimum 53; precipitation, .62 inch.

NORTH PLATTE:

Dry weather continues in this section. Evening thunder clouds have been of frequent occurrance, but there has been no rain for the past two weeks. Strong winds have been persistent. Maximum temperatures have exceeded 90 degrees each day this week and 99 degrees were reached on two days. Winter grains are ripening rapidly. A few plots of rye and winter wheat were harvested to-day, June 27, which is the earliest harvest date in several years. Considerable firing has taken place on lower leaves of spring grains. Corn continues to make rapid growth.

The number of visitors in attendance on Crops Day, June 25, was small. Only 25 cars made the tour of the experimental fields in the afternoon. In several recent years the number of cars have exceeded 100.

The Sub-committee on Irrigation and Reclamation of the Committee on Appropriations of the U. S. House of Representatives, accompanied by Governor C. W. Bryan, Chancellor E. A. Burnett, Dean W. W. Burr, State Engineer R. E. Cochrane and others made a tour of this part of the state on June 22 and visited the station on that afternoon.

Mr. T. R. Stanton, of the Division of Cereal Crops and Diseases, spent June 25 at the station in the interests of the oats cooperative work.

COLBY:

It has been exceptionally hot and windy all week. The maximum temperature has gone up to 100 or over every day but Monday, June 22. The corn and sorghums have made rapid growth. The small grains are all ripening prematurely. Practically all the winter wheat plots could be cut with a binder now. The oats and barley will be ready in a few days. None of the small grains will be particularly well filled. The barley will be especially light. None of the spring wheat plots will yield any grain or straw to speak of.

The thinning of the sorghums was finished this week. The milo and sumac cane and kafir plots were cultivated. Weeds had started but were pretty effectually killed with the assistance of the hot weather.

Maximum temperature 102; minimum 60; precipitation, none.

GARDEN CITY:

Thinning of sorghums was finished this week. They are making rapid growth. Weeds are coming fast and cultivation will have to be started as soon as possible after all wheat cutting is finished on the state ground. Wheat cutting was finished on the dry land project to-day, June 27. Straw growth is very heavy and bundles seem light.

For the last ten days we have had hot, dry winds from the south that have hurt the filling and maturing of wheat in a natural way. General combining of wheat over the country will start the first of next week.

Seven days of June so far have been 100 degrees or above. Every day the wind velocity has averaged above ten miles per hour or more.
Maximum temperature 104; minimum 70; precipitation, none.

HAYS:

Two and one-half inches of rain, accompanied by considerable hail early in the morning of the 20th, fell so rapidly that a large portion of the water was lost by run-off and the hail caused a loss of winter wheat on the plots of not less than 10 to 15% and from 15 to 25% loss on barley and oats. Spring wheat suffered less and the feed crops while more or less disfigured will make full recovery, except where washed under in a few places.

Hot weather since the storm has hastened the ripening process of the small grains. Oats and barley plots were all harvested June 25 and 26. Winter wheat is practically all ready - not over-ripe but just ready for a good start with combine Monday, June 29. The combine is being tried out and tuned up to-day, June 27. It now appears the yields of wheat will go beyond expectations. A few farmers are starting to-day on harvest, and the yields are reported at from 25 to 30 bushels and the quality is excellent.

Corn and sorghums are making fine growth. Both these crops on the project were cultivated during the week.

TUCUMCARI:

Weather the past week has been hot and dry, with crops and ranges showing necessity of moisture. Thinning of rotation plots, cultivating plots and increase land, and field cultivating fallows and tree rows have occupied the time of the station force.

Wheat harvest on the plains is just in full swing, with grade and yield better than expected. Over most of the county practically no rain has fallen the past month, so maturity has been early, although probably very little wheat was drought injured.

Station visitors this week included Professor. J. C. Overpeck, Mr. C. P. Wilson, and Mr. John Carter, of the New Mexico A. & M. College.
Maximum temperature 100; minimum 63; precipitation, none.
Wind velocity, 5.7 miles per hour; evaporation, 2.892 inches.

DALHART:

The weather remained hot and dry during the week. No rain has been received, except for a very light shower, during the past three weeks. Some of the later plantings, after June 10, are going to have very irregular stands. All sorghums planted before June 10 have been thinned and to-day, June 27, a start was made on the rotation milo plots. There still remains about a week of thinning of the later planting.

Barley, winter rye, and winter wheat were harvested during the week. Yields of all three will equal or exceed the yields for the same crops last year. The quality of the wheat and rye is going to be good.

Thinning was the rush work during the week. The plots were cultivated as soon as thinned. Early Richmond cherries were picked during the week. Good yields were secured but the quality of the fruit was not up to average.
Maximum temperature 102; minimum 61; precipitation, none.
Wind velocity, 6.3 miles per hour; evaporation, 3.102 inches.

BIG SPRING:

Weather conditions during the past week have been such that full time was devoted to field work. Rainfall during the month of May and thus far in June has been the lightest in many years. The total for May was .75 inch as compared with a 30-year average of 2.67 inches, while the total for June thus far is .53 inch as compared to a long time average of 2.17 inches. In spite of the dry weather during this period, all station crops are making a very satisfactory growth.

The station wheat was threshed during the first part of the week. Yields varied from 2 to 6 bushels per acre, which would indicate that this is not much of a wheat country. Two knifing outfits have been kept busy most of the time this week, with the result that all weeds have been pretty well cleaned up. Other work has consisted of thinning cotton, kafir, and the June 1 date of planting of grain and forage sorghums.

Maximum temperature 98; minimum 70; precipitation, none.

LAWTON:

Row crops of all kinds, alfalfa, sweet clover, and native grasses show the need of additional moisture after a week of blistering temperatures when the average maximum temperature for seven days was 98.6 degrees. The wind velocity has been more or less transitory, but as a whole quite low.

Cotton chopping, sorghum thinning, cultivation of all row crops, threshing, cleaning seed, and reshingling the roof on the office building, constituted the working program the past week.

The 1931 wheat yields on the rotation plots were as follows:

Previous crop.	Tillage.	Bu. per acre.
Wheat	Late fall plowed	27.5
"	Early fall plowed	28.7
"	Fall plowed, subsoiled	28.3
"	Listed	25.5
"	Listed, manured	27.2
Fallowed	- - - -	31.7
Fallowed, manured	- - - -	35.0
Fallowed, topdressed	- - - -	35.5
Oats	Fall plowed	20.0
Cowpeas	Disked	32.1
"	Disked, topdressed	32.5
"	Greenmanured	30.9
Cotton	Drilled	29.6
"	Drilled, topdressed	31.7

Lawton, continued:

Previous crop.	Tillage.	Bu. per acre.
Barley	Fall plowed	24.5
Wheat	Disked, early	29.2
"	Disked, late	15.8
"	Disked, as needed	18.8
Average yield of all plots.		28.7

Four check plots of Turkey in the wheat variety test project produced an average yield of 29.25 bushels per acre.

Quite a number of oats plots have been threshed, but the seed has not yet been cleaned and weighed.

Local markets the past week were: wheat, .36¢; oats, 16¢; and barley, 20¢.

Grasshoppers are quite numerous this summer and some damage resulted on cotton plots that were close to wheat and oats.

Some heading is in progress and some bagging has been done on a few of the earlier varieties and crosses in the April 15 planting in the chinch bug resistance project.

WOODWARD:

Weather the past week has been almost perfect for wheat harvest. While temperatures have run rather high, wind has been light and there has been no rainfall. Freedom from heavy rains has allowed farmers to finally obtain stands of row crops. Due to the frequent rains earlier many farmers have been forced to replant kafir and milo two to three times.

Wheat harvest on the station was completed this week except for a very few late varieties, and threshing should get well under way during the coming week. Combining of wheat over the country is well advanced.

Work on the station during the week consisted almost entirely of harvesting wheat. The vineyard was sprayed and some dehorning of Chinese elms and arborvitaes injured by late freezes was accomplished. A number of the older Chinese elms which have failed to rally from freeze injuries will have to be dug up.

Maximum temperature 100; minimum 71; precipitation, none.
Evaporation, 3.061 inches.